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(54) **ILLUMINATION OPTICAL UNIT FOR EUV PROJECTION LITHOGRAPHY**

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(58) **Field of Classification Search**

CPC G03F 7/70141; G03F 7/70075; G03F 7/70058

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(57) **ABSTRACT**

An illumination optical unit for EUV projection lithography has a first and second facet mirrors, each with a plurality of reflecting facets on a support. The facets of the first facet mirror can be switched between various tilt positions. In each tilt position, the tiltable first facet is assigned to a second facet of the second facet mirror for deflecting EUV radiation in the direction of this second facet. Each of the first facets is assigned to a set of second facets by its tilt positions. The two facet mirrors are arranged so that an arrangement distribution of second facets, impinged upon via the first facets, results in an illumination-angle distribution of an illumination of an illumination field.

28 Claims, 15 Drawing Sheets

